REMARKS

This request for reconsideration is responsive to the Final Office Action dated July 1, 2009. Claims 1, 10, 13, and 19 are independent claims. Reconsideration and allowance is requested in view of the following remarks.

Rejections under 35 U.S.C. § 102/103

Claims 1, 3-7, 9, 13, 15, 16, and 18 have been rejected under 35 U.S.C. § 103 as obvious over Nakano et al (U.S. Patent No. 6,765,551, hereinafter referred to as "Nakano '551") in view of Inukai (U.S. Patent No. 7,042,427, hereinafter referred to as "Inukai '427"). Applicant respectfully traverses this rejection.

Claim 1 recites:

> *An image display device, comprising:*
>
> ***a circuit*** *for generating drive signals from an input image signal;*
>
> ***a plurality of pixels*** *including a light emitting element for emitting light of a predetermined color of red, green, or blue by being applied with said drive signal supplied for each color from said circuit;*
>
> ***an adjustment information retrieve means*** *for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element;*
>
> ***a level adjustment circuit*** *provided in said circuit , for changing a level of an RGB signal before dividing said drive signals to respective RGB colors based on said information obtained by said adjustment information retrieve means; and*
>
> *wherein said level adjustment circuit changes a level of a direct current voltage supplied to said circuit, proportionally to account for the deterioration of a luminance of said light emitting element; and*

said adjustment information retrieve means and said level adjustment circuit further comprise:

a plurality of pixels, including pixels of at least each respective RGB color;

a detection means for detecting a changing value corresponding to the luminance of the plurality of pixels by measuring the voltage between the ends of the light emitting elements.

Nakano '551 ***fails*** to disclose, teach or suggest "*an adjustment information retrieve means for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element; a level adjustment circuit provided in said circuit , for changing a level of an RGB signal before dividing said drive signals to respective RGB colors based on said information obtained by said adjustment information retrieve means.*"

Moreover, Nakano '551 ***fails*** to disclose, teach or suggest "*wherein said level adjustment circuit changes a level of a direct current voltage supplied to said circuit, proportionally to account for the deterioration of a luminance of said light emitting element; and said adjustment information retrieve means and said level adjustment circuit further comprise: a plurality of pixels, including pixels of at least each respective RGB color; a detection means for detecting a changing value corresponding to the luminance of the plurality of pixels by measuring the voltage between the ends of the light emitting elements.*"

The Office Action, however, alleges these features can be found in Nakano '551. This is wholly inaccurate.

Nakano '551 discloses a column electrode driving circuit including a reference voltage generation circuit that adjusts the chromaticity of the display signal ***after dividing the drive signals to their respective RGB colors.*** The display applies one of 64 grayscale levels of luminance to each separated RGB color signal.

In contrast, applicant claims a level adjustment circuit provided in said circuit, for changing a level of an RGB signal before dividing said drive signals to respective RGB colors based on said information obtained by said adjustment information retrieve means.

Moreover, there is ***no mention*** of a level adjustment circuit or an adjustment information retrieve means for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element in Nakano '551.

Fig. 3 of Nakano '551 illustrates the mechanism by which RGB values are adjusted. Sampling memory 3 receives data that is divided into separate values, which pass to hold memory 4, then D/A converter 5. D/A converter 5 uses the reference voltages for each of the different colored pixels to adjust the chromaticity of the different pixel RGB values. However, this adjustment is clearly being done after the signal is divided into its constituent RGB values.

Fig. 1 of Nakano '551 illustrates an example whereby Nakano '551 replaces elements 4-6 of Fig. 3 with a more complex color adjustment mechanism having 64+3 individual color adjustment line values. Nakano '551 explains that the color adjustment line values provide values that correspond to Red, Blue, and Green color adjustments (col. 6, l. 64 – col. 7, l. 11).

The Office Action rejects the cited portion of claim 1 by citing to element 70 of Nakano '551 and columns 6 and 8. The cited portion of column 6 recites:

> The output circuit 60 subjects the analog signals ***which have been converted*** by the D/A converter 50 to impedance conversion, and outputs the resultant analog signals as 40 ***driving voltages to the data lines*** coupled to the respective output nodes.

As such, the cited portion of claim 6 runs counter to the Office Action interpretation, as it clearly recites adjustments being made to the signal after the signal has been divided into its respective components.

Furthermore, the elements of Fig. 1, such as elements 40-70 replace elements 4-7 in Fig.3. However, they maintain the same form of input and output. These components operate and receive

the RGB data as 384 values, with 128 inputs designated for each color (Col. 1, ll. 42-50). Since the wholesale replacement of the elements does not change their respective inputs, it becomes further evident that elements 40-70 **operate on divided drive signals**.

- **Therefore, Nakano '551 fails to disclose, teach or suggest an adjustment information retrieve means for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element; a level adjustment circuit provided in said circuit , for changing a level of an RGB signal before dividing said drive signals to respective RGB colors based on said information obtained by said adjustment information retrieve means.**

Inukai '427 does not remedy the deficiencies of Nakano '551, as the various features recited above are also absent from Inukai '427. Inukai '427discloses a mechanism for measuring luminance decay but fails to teach disclose or suggest, for example, Applicant's claimed features of "*an adjustment information retrieve means for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element; a level adjustment circuit provided in said circuit , for changing a level of an RGB signal before dividing said drive signals to respective RGB colors based on said information obtained by said adjustment information retrieve means,*" are neither disclosed nor suggested by Inukai '427.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Applicant submits that a prima facie case of obviousness for claim 1 has not been presented. Applicant also notes that the offered combination appears to be a failed attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine the column electrode driving circuit of Nakano '551 with the mechanism for measuring luminance decay of Inukai '427.

For the reasons stated above, claims 13 also are distinct from the Nakano '551 in view of Inukai '427 (although claims 1 and 13 should be interpreted solely based upon the limitations set forth therein). Furthermore, at least for the reason disclosed above, claims 3-7, 13, 15, 16, and 18 overcome the combination of Nakano '551 and Inukai '427 because they depend on independent

claim 1 or 13 and thus incorporate the distinct features therein, as well as their separately recited patentably distinct features.

Accordingly, Applicant respectfully requests that the rejection of claims 1, 3-7, 9, 13, 15, 16, and 18 under 35 U.S.C. § 103(a) as being unpatentable over Nakano '551 in view of Inukai '427 be withdrawn.

Claims 10-12 and 19-22 are rejected under 35 U.S.C. § 103 over Nakano in view of Miyachi et al (U.S. Patent No. 6,982,686 hereinafter referred to as "Miyachi '686"). Applicant respectfully traverses this rejection.

Claim 10 recites:

> *An image display device, comprising:*
>
> ***a circuit*** *for generating drive signals from an input image signal; and*
>
> ***a plurality of pixels*** *including a light emitting element for emitting light of a predetermined color of red, green or blue by being applied with said drive signal supplied for each color from said circuit;*
>
> *wherein said circuit comprises*
>
> ***a motion detection circuit*** *for detecting motions by said image signal;*
>
> ***a level adjustment circuit*** *for changing a level of an RGB signal before the RGB signal is divided to said drive signals for the respective RGB colors based on a result of the motion detection obtained from said motion detection circuit; and*
>
> ***a duty ratio adjustment circuit*** *for changing the duty ratio of a light emission time of said pixels based on the motion detection result;*
>
> *and wherein the plurality of pixels each comprise a light emission control circuit whereby once the pixel receives a drive signal, the light emitting element continues*

to draw on a voltage source so long as the light emission control circuit receives a signal from the duty ratio adjustment circuit.

As discussed above, Nakano '551 ***fails*** to disclose, teach or suggest "*a level adjustment circuit for changing a level of an RGB signal before divided to said drive signals for the respective RGB colors based on a result of the motion detection obtained from said motion detection circuit*," as recited in independent claim 10.

Miyachi '686does not remedy the deficiencies of Nakano '551, as the various features recited above are also absent from Miyachi '686.

Miyachi '686 discloses a method and apparatus for managing the light intensity of cold-cathode tubes in LCD monitors. Particularly, the cited elements of Nakano '551 are directed to a system for managing the illumination produced by cold-cathode tubes based on the motion present in a video signal. In Fig. 42, a video signal is input to liquid crystal panel control circuit 804. Control circuit 804 produces three output signals, two output signals for controlling the liquid crystal panel 805, and one output signal for controlling inverter control circuit 801. Inverter control circuit 801 controls cold-cathode tube 803, via Inverter 802. No signal is passed to the liquid display panel 805 for controlling the cold-cathode tube. Instead, an external circuit, i.e. inverter circuit 801, dims the cold-cathode tube.

There is ***no mention*** of a level adjustment circuit or an adjustment information retrieve means for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element in Miyachi '686.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Applicant submits that a prima facie case of obviousness for claim 10 has not been presented. Applicant also notes that the offered combination appears to be a failed attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine the column electrode driving circuit of Nakano '551 with the method and apparatus for managing the light intensity of cold-cathode tubes of Miyachi '686.

For the reasons stated above, claims 19 also are distinct from the Nakano '551 in view of Inukai '427 (although claims 10 and 19 should be interpreted solely based upon the limitations set forth therein). Furthermore, at least for the reason disclosed above, claims 11-12 and 20-22 overcome the combination of Nakano '551 and Miyachi '686because they depend on independent claims 10 or 19 and thus incorporate the distinct features therein, as well as their separately recited patentably distinct features.

Accordingly, Applicant respectfully requests that the rejection of claims 10-12 and 19-22 under 35 U.S.C. § 103(a) as being unpatentable over Nakano '551 in view of Miyachi '686 be withdrawn.

Claim 17 is rejected under 35 U.S.C. § 103 over Nakano '551 and Inukai '427 in view of Tanada et al (U.S. Patent No. 6,774,578, hereinafter referred to as "Tanada '578"). Applicant respectfully traverses this rejection.

Claim 17 depends from and thus incorporates the features of claims 13 which are neither disclosed nor suggested by Nakano '551 and Inukai '427, for the reasons stated above.

Tanada '578 does not remedy the deficiencies of Inukai '427, as the various features recited above are also absent from Tanada '578. For example, Applicant's claimed features of "*a level adjustment circuit for changing a level of an RGB signal before divided to said drive signals for the respective RGB colors based on a result of the motion detection obtained from said motion detection circuit,*" are neither disclosed nor suggested by Tanada '578.

Tanada'578 discloses a device for detecting and accounting for EL degradation by detecting the variance in luminance on a pixel-by-pixel basis. Tanada '578 employs photoelectric elements 106 which are each positioned on a separate pixel 107 of the display device. This allows each photoelectric element 106 to monitor a given pixel 107, which in turn allows the system to properly adjust the intensity of the pixels. Each photoelectric element 106 monitors the actual light output of the pixels. The system operates by making corrections based on a test pattern provided in unit 103. Memory circuit 104 stores the brightness results, and the data brightness correction is stored in

correction data storage portion 102. In the background, Tanada '578also discusses how previous attempts to account for pixel deterioration included using a timer to track how long the display device was in use, and thereby predict the expected pixel deterioration based on experimental results.

There is ***no mention*** of a level adjustment circuit or an adjustment information retrieve means for obtaining information relating to light emission adjustment proportional to the deterioration of said light emitting element in Tanada '578.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Applicant submits that a prima facie case of obviousness for claim 10 has not been presented. Applicant also notes that the offered combination appears to be a failed attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine the column electrode driving circuit of Nakano '551 with the mechanism for measuring luminance decay of Inukai '427 with the detecting and accounting for EL degradation of Tanada '578.

Accordingly, Applicant respectfully requests that the rejection of claims 17 under 35 U.S.C. § 103(a) as being unpatentable over Nakano '551 in view of Inukai '427 and in view of Tanada '578 be withdrawn.

Conclusion

In view of the above amendment and remarks, applicant believes the pending application is in condition for allowance.

This response is believed to be a complete response to the Office Action. However, Applicant reserves the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicant expressly does not acquiesce to the taking of Official Notice, and respectfully

request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2839 from which the undersigned is authorized to draw.

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Respectfully submitted,

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